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1922

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 3 1922

REPORT FOR WEEK ENDING JUNE 3, 1922.

AKRON:

The station grounds were mowed and all shrubery and orchards cultivated and hoed the first part of the week. Decoration Day brought rain. Various inside jobs were attended to following the rain when the fields were too wet to work. Plowing of fallow strips was started Thursday and by evening two three-acre strips will have been finished. Sheep are being sheared today. Corn is emerging.

Mr. M. N. Pope of the Cereal Office visited the station Wednesday and Thursday in the interest of barley investigations at this station.

Maximum temperature 75, minimum 36; precipitation 1.21 inches.

BELLE FOURCHE:

A heavy shower occurred on the 29th, and the weather remained cool and moist until the 31st of May. Since then the weather has been hot and dry. Crops are still well supplied with moisture and are growing very rapidly.

Young grasshoppers are appearing in great numbers in portions of the project and indications are that they will be distributed over a much greater portion of the project than they were last year.

At present all crops are in as advanced a condition for this season, as they have been any season in the past ten years. The acreage of practically all crops will be greater than last year's.

Maximum temperature 85, minimum 36; precipitation 1.02 inches.

ARCHER:

The weather has been very cold and wet, with a very high humidity. The precipitation which occurred May 28 was preceded by hail of considerable size. The hail to the west of the station did considerable damage to crops and buildings. The four succeeding days were marked by precipitation. That coming on the night of May 31 consisted of sleet and snow. The next morning the ground was covered to the depth of two inches. Since June 1 the weather has been clear and warm.

The frost of the night of May 31 did considerable damage. The temperature reached 24 degrees. The corn which had emerged was frozen and the leaves of the ash, which had just come forth were also frozen.

The work during the wet weather consisted of cleaning the barn yards. The potatoes have been planted and the seed plats of corn and sunflowers have been seeded. The farmers are seeding the last of the cereals. Every one is glad that their millet is not in the ground.

Climatic data: Maximum temperature 74, minimum 24; precipitation 1.12 inches.

BIG SPRINGS:

Rainy weather has again delayed field work for a few days. Three rains, totalling 1.45 inches, have fallen during the last half of this week. Although these rains did not measure so much in inches, they came so hard that considerable run-off and washing occurred.

All of the plats have been planted, and with the exception of some of the cotton plats, are up to a good stand. Several of the cotton plats came up to such a poor stand that it will be necessary to replant them. The May 30 date of planting was made this week, and one block in the commercial field was planted to feterita and honey sorghum. The last two days have been spent mainly in cleaning out fence rows and hoeing the orchard.

Maximum temperature 85, minimum 48; precipitation 1.45 inches.

COLBY:

Moisture conditions were such during the week that farm work was necessarily delayed. Mondan and Saturday were the only days that the ground was dry enough to work. Fields were disced for final prepaxation of ground for Sudan grass on Monday, also bindweed patches were disced and hoed. On Saturday the field work consisted of plowing under the rye for green manure and the seeding of two fields to Sudan grass. Some hand work was done on the plats when it was possible to stay in the field. This consisted in pulling what wheat and weeds that the tools had missed when the plats were edged off. Winter rye on Rotations 151 and 152 was 40 inches high and a fairly rank growth of foliage. The rye on plat 153 was not so thick nor was it quite as rank.

Winter wheat is about 50 per cent headed, and appears to be doing good. The "H" plat of the Method of Fallow series continues to be the rankest of the winter wheat plats. The showers during the week caused it to lodge some but not so much but what we expect it to recover. Spring grains continue to grow and look good. A few heads are showing on some of the barley plats. Corn is up to a good stand. Of course, it will necessarily have to be thinned considerably. Commercial fields of corn have sufficient stand and corn varieties will have to be thinned.

Precipitation for the three days that rain fell amounted to .79 inch.

DALHART:

The past week has had a full schedule of rain. There has not been a night that it has not rained and sometimes during the day. On the night of the 27th the precipitation was 2.90 inches. This rain was accompanied by hail. This is the first damaging hail that has occurred here for a long while, especially at the station. It so happened that the crops were not far enough along to be damaged. Trees were pretty severely beaten by hail which was the size of a half dollar. In other sections, (locally), much damage was done. Hail seemed to be scattered. Since it has rained steadily for a week the necessity of replanting is much lessened as the soil has not had a chance to bake. The young crops are coming right along through water. This is a little early to state definitely on the replanting but present conditions seem favorable for a stand. Oats and rye are making good progress at this time. The rye is heading. In checking the rye stands the middle of the week there is not one that will average above 50 per cent and some as low as 10 per cent.

No field work could be done this week. Between showers some work was done with the hoe among the tree and ornamental plantings. The pasture fence was also grounded on all four sides for protection against lightning. The mower is being used today to clean up the meadow in front of the buildings.

Climatic data: Maximum temperature 90 on May 27, minimum 42 on May 28; precipitation 4.66 inches. This makes a total of 11.59 inches since April 3.

HUNTLEY:

The first part of the week was cold and rainy, no field work being possible until Thursday. Frost was observed twice during the week, but freezing temperatures did not occur at the weather instrument shelter.

Corn and sunflower planting was completed on the Dry-land fields June 2. Soil sampling has been carried on when conditions permitted and will be finished today.

Maximum temperature 80, minimum 34; precipitation .71 inch.

JUDITH BASIN:

The first part of the week was too cool to permit of but very little crop growth, but there was an abundance of moisture in the soil from the rains of the previous week and conditions were ideal for the stooling of wheat. The weather during the past three or four days has been unusually calm, hot, and sultry.

The growth of all crops has been very pronounced and the majority of the trees are in full leaf. Winter wheat on summer tilled land varies from five to eight inches in height and the growth is over twice as great and vigorous as that on fall plowed or listed land. Winter rye has attained a height of about 16 inches and is in the boot. Corn and sunflowers are commencing to come up.

Field work has been devoted chiefly to the grading of all roads, cultivating of trees and completing the planting of trees. Plowing of land to be summer fallowed was also commenced.

Maximum temperature 82, minimum 34; precipitation .05 inch.

MANDAN:

Agronomy.

The past week was warm and dry. The total rainfall for May was 2.05 inches, which is .42 inch below the 45-year mean, and one inch below that of May 1921. The total precipitation for the year to date if 5.06 inches, or 1.03 inches below the 45-year mean. The May rainfall came in 17 different showers, ranging in amount from .01 to .38 of an inch. Maximum temperature 79, minimum 38; precipitation 0.22 inch.

The growth of small grain during the week has been retarded. Winter rye is fully headed out and will be ready to turn under within a few days. Corn has made rapid progress, the injury to it by cutworms has been slight. About twelve acres of cane was planted for feed; this will no doubt not come up before a rain.

Sorghum varieties were planted for the Office of Forage Crop Investigations Soy bean varieties were also planted for the same office.

Plowing for summer fallow will be completed today. The soil is very dry and turns up lumpy, which is unusual for this time of the year.

Cooperating Grazing Experiment.

The native vegetation shows sings of drying up in spots. The cattle made average gains of about 55 pounds per head during the first ten days on pasture. This is about the average gain usually made for the same period.

Horticulture.

Planting has been completed in the acre and coulee gardens. Varieties from earlier plantings are now coming up, and good stands are the rule. The remainder of the tomato selections were planted during the week.

The fruit set will be fair to good this year, but not as heavy, in general, as last year. The second spray, given just after the petals fall, has been applied during the week. It is hoped that these sprayings will control the plum gouger which caused so much damage last year. The spray as applied contained arsenate of lead, lime sulphur, and nicotine sulphate.

Other work included tieing up buds and raspberries, cultivating and hoeing weeds.

ARBORICULTURE.

Cultivation and hoeing has continued during the week.

American and Chinese elm seed were planted; most of the Chinese elm seed in a field that can be irrigated, and the American elm seed on Dry-land. Both kinds of seed were, however, planted on both irrigated and Dry-land, to determine if they can be made the proper size for shipping on one year under irrigation.

Office work in preparation of inspection sheets is under way and when

Mandan, continued:

completed, route map work will be begun. Taking of notes on all experimental trees will be begun next week.

NORTH PLATTE:

The week has been cool and wet. On Saturday p.m. a week ago today 2.20 inches of rain fell in less than two hours, on the table.

Listed corn, which had emerged with perfect stands was very badly washed. Some replanting was necessary on all plats and some fields and plats have been entirely replanted. Several lighter rains have occurred during the week. The May rainfall on the table was 4.19 inches, while 2.98 and 2.33 inches were recorded on the bench and at North Platte respectively. The normal for the month is 3.06 inches. Winter wheat is beginning to head and is a good height. All grain crops have made a heavy growth during the week. A farmer's picnic was scheduled here for June 1. Rain fell during most of the day and only about 50 people were in attendance.

TUCUMCARI:

Rain which fell six days of the past week prevented field work during this period, although the total precipitation was only 1.37 inches. The time has been spent in doing odd jobs, such as cleaning the pit silo, grinding feed, trimming hedges, hoeing shrubs, and a little painting.

Heavy rains have fallen on the plains east and south of here, and it is said the wheat is improving in appearance rapidly. Elevator men estimate about one-third of a crop, while two months ago it was thought practically all wheat was a failure. Much of the poorest wheat was put into row crops.

With the exception of four or five plats, everything in the south field looks well. The listed M.C. plats in the center field may require replanting, as many of the furrows washed half full of sand during the recent rains. So far as can be determined now, plats in the north field which were planted just a week ago are germinating well: some plats of kafir and milo show almost a perfect stand, while other seeds have sprouted.

Maximum temperature 93, minimum 48; evaporation 1.557 inches; evaporation for May 9.081 inches; precipitation 1.37 inches; May precipitation 2.04 inches; wind velocity 5.1.; average velocity for May 5.5 miles.

WOODWARD:

There has been some precipitation, from a trace to .14 inch recorded on six days of the past week. There has not been enough precipitation at any one time to keep us out of the field for more than a few hours during the week. The wheat on the D.L.A. project is looking very good at present and is in the soft dough stage and beginning to show a little color; with sufficient moisture from now on the yield will probably be much greater than has been expected. This, of course, only applies to the plats where a good stand was obtained last fall. Cotton, sumac, kafir, and peanuts are making a rapid growth at present.

During the week the ground has been plowed and otherwise prepared for milo, corn, broomcorn, cowpeas, beans, and Sudan grass on the D.L.A. plats, and these crops have been planted. Considerable planting has also been done on the Cereal Office project, and a field of Hawn kafir for seed has been planted. The kafir and peanuts on the D.L.A. plats have been cultivated.

Maximum temperature 81, minimum 54; average hourly wind velocity 4.2 miles; evaporation 1.761 inches; precipitation .29 inch.

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U. S. DEPARTMENT OF AGRICULTURE

JUN 10 1922

REPORT FOR WEEK ENDING JUNE 10, 1922.

AKRON: -

Nearly ideal corn growing weather maintained during the week. All spring sown crops are making nice progress and winter wheat wherever a stand was secured has stooled heavily and is now nearing the heading stage.

The remainder of the Forage experiment was seeded the fore part of the week. The rotation and the sheep rotation corn plats were cultivated. Cane and kafir were seeded on the rotation plats as well as one increase block of 1 acre each of Red Amber sorgo and Freeds' sorgo. Rotation fallow plats were plowed the last of the week. Thinning of corn in the corn rate-of-planting experiment was about half completed. Some time was spent in the forestry removing pruned branches and dead trees. All Cereal Project alleys were cultivated the last of the week.

Maximum temperature, 93; minimum, 46; and precipitation, 0.

BELLEFOURCHE: -

Rain on four days of the week kept crops in good growing condition. The small-grain plats were filled nearly to capacity with moisture. Winter rye has headed and barley is in the boot. Winter wheat is no farther along than spring wheat.

Cutting of alfalfa on the project was commenced about the 5th and a good many fields were being cut when rain stopped the cutting on the 7th. Practically all of the hay cut was seriously damaged. The first cutting of alfalfa is coming into bloom earlier than normal, and prospects are that there will be a heavy crop.

Grasshoppers have appeared in great numbers in some localities, and a number of fields are already being poisoned.

Maximum temperature, 84; minimum, 47; and precipitation, 1.42 inches.

BIG SPRINGS: -

Weather conditions this week were very conducive to crop and weed growth. The rains of last week allowed but very little field work, so the weeds had a chance to get a good start. A 1-inch rain on the night of June 4 stopped field operations until Tuesday; since that time two knifing outfits have been kept busy. As a result all the plats have been cleaned out, as well as one of the commercial fields. The second date-of-planting of sorghums and cotton were also thinned this week.

The total rainfall up to date for this year is 19.77 inches, as compared with a 20-year average of 18.45 inches for the whole year, or 5.85 inches for the first six months of the year.

Maximum temperature, 87; minimum, 55; and precipitation, 1 inch.

COLBY: -

Winter wheat is not in the bloom and looks fine. There is not enough moisture in the soil to carry the winter wheat long without rain. Wheat has a good color, except for the first few leaves from the ground, which are yellow. The heads of winter wheat are longer than usual. A few of the fallow plats are thin, while most of the other methods show a lack of sufficient stand. Soil moisture is being continued on the MC. series of winter wheat and on rotation No 574B, C, and D, and on the check plat of winter wheat continuously stubbled in. The last named plat continues to have the most moisture of any of the plats sampled. There is also much thinner wheat on this plat.

Colby, cont'd.:

Milo, kafir, feterita, and sorghum varieties were planted during the week. There is apparently sufficient moisture in the surface planted plats of milo and kafir to give germination and emergence. The listed plats will undoubtedly not come up until it rains.

Commercial fields were planted to Red Amber sorgo for silage. Another field was planted to milo for feed.

Spring grains continue to look good; they now have good height and color. The barley plats are fully headed. A few oat heads are showing. Corn is growing nicely.

Maximum temperature, 98 on the 9th (highest of the year); precipitation 0.

DALHART: -

There has been less rain the past week than was reported in the last report. However, the result of the rains caused the fields to be in such shape that no work could be done until toward the end of the week. The first three days of the week followed the regular schedule of the previous week: "rained every day". Since that there has been no rain but plenty of wind. Everything was in fine shape to blow and too wet to work. Today (Saturday) is the only day since the rain ceased that the wind has not blown sufficiently to cause blowing.

A part of the fields dried off sufficiently by Thrusday afternoon to start the cultivator. By Friday the north field was dried off enough to cultivate all the crops and to spring-tooth the plats that are to be planted to milo. this had to be done to save the young crop from being cut off by drifting sand. The field where the dates are planted is too wet to work yet, but may be dry enough to work by Monday. The June 1 date has not been planted yet on account of the rains. If it should rain again before Tuesday it would not do to plant before the 15th.

The kafir on the rotations, also the cowpeas, are up to a good stand. The rains coming as they did every night for 10 days gave the crop time to germinate and come through before a hard crust was formed. Work is being rushed for completion of the planting by next week, excluding dates. The Cereal block is needing attention more than any other field and is yet too wet to work. The two dates that are already planted are clean but the remainder of the block is gettin pretty weedy. The weed growth is small yet and is not doing much damage toward sapping the soil moisture. One plat has been under water for two weeks. Some kafir on the M. C. South Field is still under water.

Maximum temperature, 91; minimum, 48; precipitation, .89 inch. The total precipitation since April 3 is 12.48 inches.

DICKINSON: -

The week started dry and extremely hot, so that crops were beginning to show marked effect of drought. One night, the 6th, a good shower fell and during the rest of the week the weather continued rainy or cloudy and crop prospects have greatly improved. Over 2 inches of rain fell, and this was so well distributed that there was practically no loss in cultivated fields.

Corn in the rotations was worked with the cultivator for the first time the 6th. The stand on the rotations is good but on a portion of the increase corn cutworms have taken more than half of the stand. Most of the sunflowers planted for silage were also destroyed by this pest. Mr. C.N.Ainslie of the Bureau of Entomology who visited the station the 8th and 9th has identified the species doing most of the damage as the pale western cutworm. Reports indicate that a large acreage of small grain in the county has also been destroyed.

Dickinson, cont'd.:

Mr. John H. Martin of the Cereal Office spent the week at the station studying material in the winter wheat nursery and preparing plants of rye and wheat for crossing.

An order has been placed for a pneumatic tank of 2,260 gallons capacity. The drilling of the well and the wiring of all buildings except one have been completed.

Maximum temperature, 92; minimum, 40; and the precipitation for May, 1.97 inches, or .44 inch less than the 30-year average.

GARDEN CITY: -

Climatic conditions during the past week have been very severe for the growing crops. Considerable wind movement has occurred on each day. Hot winds on the 9th and 10th caused winter wheat on continuously-cropped land to fire badly.

Planting was completed during the week. Sorghums that were planted in the date-of-planting experiment on May 31 have emerged in good stands.

Mr. E.H.Coles, who has been recently appointed as a member of the Dry-Land Office, and assigned to this station arrived on the 6th and immediately entered upon his duties. Mr. Coles is a graduate of the Kansas State Agricultural College, having finished his course with the class of 1922.

Maximum temperature, 93; minimum, 50; precipitation, .02 inch; evaporation, 2.334 inches; and average hourly wind velocity, 9.2 miles.

HAVRE: -

With .37 inch of rain accompanied by cool days, growing conditions for small grains have been very good during the last week.

Corn planted a week ago is just coming through the ground and flax seeded on June 1 is up with an excellent stand. All crops, including the native grasses, are making good growth. Spring grains are shooting and rye is nearly in the bloom. Alfalfa is nearly ready for the first cutting.

Pale western cutworm, while not so general as last year in their injury to crops, are still present and in some localities are injuring grain crops very materially. Grasshoppers are very numerous in certain sections, confined mostly to the mountain section.

Maximum temperature, 89; minimum, 41; - on the 9th.

HAYS: -

The weather during the week has been warmer than that of the previous week; also drier and more windy. The temperature ranged from 51 to 91 degrees, and there was no rain during the week.

None of the crops have suffered for moisture, but the water is pretty well used up by the heavy growth of the small grains. The fall or winter germinated winter wheat will not require much more water, nor will the oats or barley need much, but the spring germinated winter wheat and the spring wheat which is now heading (is about 30 per cent headed) will suffer if rain does not come within a few days.

Peas were pretty badly lodged by wind the last of the week and have not recovered to any extent. Row crops are all looking good, but have within the last few days become badly infested with plant lice. If favorable weather for these insects should prevail, there is a chance for considerable damage to the smaller or later crops.

Hays, cont'd.: -

It has been a good week for hay making and weed killing, and most the week was spent in that way. Thinning of surface planted sorghums was finished and soil samples were taken on several plats.

HUNTLEY: -

Soil sampling, cleaning alleys, and staking roads for plowing have been the major field operations for the week. Frequent showers have kept the land too wet to permit satisfactory work being done with teams and machinery.

Cool, cloudy weather has kept crops from making much growth, though winter wheat has shown some progress in that the plants are beginning to send up stalks. Winter rye, which has been jointed for some time, is beginning to head out.

Hogs in the pasture experiments have made very satisfactory gains, averaging nearly 1 pound a day for the past two weeks. In no case has there been a shortage of feed in the pasture lots, but on the other hand, the alfalfa and rye forage have made such a growth that the plats will have to be clipped to keep the growth palatable.

Maximum temperature, 87; minimum, 47; and precipitation, 1.01 inches.

JUDITH BASIN: -

Cool, rainy weather has prevailed during a greater portion of the week, and the total precipitation was almost double that recorded for any other week this spring. Over 2 inches of rain were received and crop prospects at present are exceedingly good.

Because of the cool weather, crop growth has been rather slow. All small spring grains are commencing to joint and corn, sunflowers, and potatoes are up with good stands. Alfalfa and clover are beginning to come up. The various trees are also doing exceptionally well and have an unusually vigorous appearance.

Maximum temperature, 82; minimum, 41; and precipitation, 2.32 inches.

LAVTON: -

Weather during the past week has been mostly cool and cloudy. A rain of .67 inch on the 6th followed by cloudy, foggy weather delayed field work for a couple of days.

Three plats of oats were cut on the 6th. The remaining plats will probably be ready for harvest within three or four days. Oat harvest is about two weeks later than last year, and wheat harvest will be from two to three weeks later than usual.

All of the grain and forage sorghums with the exception of two plats resulted in excellent stands.

The earlier planting dates of grain and forage sorghums, the M.C. broom corn and cane plats, L.M. kafir plats, and M.C.G. and H milo were thinned during the week. Rag weeds and bull nettles which are a pest on many spots over the farm were chopped out with the hoes. The 2-horse cultivator and the 1-hor harrow were also used on a good many rotation plats.

Although crops are a little late, practically all row stuff is in very good shape at the present time.

Lawton, cont'd.:

Thinning of all row crops will in all probability progress regularly during the next few days.

Chinch bugs are widely scattered over the farm. MC A, broomcorn, and the LM kafir plats are now receiving the most damage. The cane strips that were seeded around the wheat blocks apparently hold only a portion of the bugs. Such strips on Field B will very likely do a lot of good. The infestation in corn has been and is now very heavy. With very favorable corn weather the plants may be equal to the attack.

Maximum temperature, 88; and minimum, 59.

MANDAN: -

Agronomy.

It was extremely hot the first part of the week. The maximum temperature was 94 degrees on the 4th and 96 degrees on the 5th. This is the highest temperature for this time of the season that has been recorded since the station started Hot winds occurred on both days. Small grain on some of the plats started to burn. The remainder of the week has been cool, cloudy, and rainy. Rain has fallen on four days, ranging in amounts from .11 to .53 inch.

Small grain has been greatly benefitted by the rains of the past week. Corn has made a fair growth. It was given the first cultivation during the week.

Winter rye for green manure was turned under during the week. The sweet clover plats were also plowed, but there was very little sweet clover present.

Brome-grass will be ready to cut the coming week. Cutting of alfalfa on the river bottoms started the first part of the week. It is from ten days to two weeks earlier than usual.

Maximum temperature, 96; minimum. 49; and precipitation, 1.07 inches.

Cooperative Grazing Experiment.

The native vegetation has burned badly in spots because of the dry weather. It has been benefitted by the rains. The indications are for a very light crop of native hay. The isolation transects have been fenced for the season.

A water meter has been installed below the supply tank in order to measure the amount of water that passes into the trough for the cattle.

NORTH PLATTE: -

Temperatures during the week have been high. The maximum range has been from 80 to 92 degrees, and the minimum about 30 degrees lower. The air has been humid but no precipitation has occurred. The first cutting of alfalfa is being put up and is occupying most of the station labor. All corn has been given the first cultivation. Barley and oats are beginning to head.

Stakes are being prepared for rotation and varietal fields to be put out previous to the Field Crops Day, June 28.

SHERIDAN: -

But little field work has been possible here since Tuesday. A light shower occurred Tuesday evening. The next evening there were two heavy showers, with

Sheridan, cont'd.: -

a total of 1.13 inches of precipitation. Light falls of rain have occurred since - sufficient to prevent the surface of the ground drying to any extent. There was some washing from the rains on the evening of the 14th, but the greater part of the moisture seems to have soaked into the ground on the cultivated land. Some hail also fell at the station.

All crops are looking well with the exception of most of the winter wheat which still continues to show but little improvement. Winter rye is heading.

Maximum temperature, 89; minimum, 47; and precipitation, 1.51 inches.

TUCUMCARI: -

Cultivation of practically all row crops for the first time has been made, two cultivators having been in the fields the past five days. Fallow plats were plowed this week, while the remainder of the increase land, 12 acres in the North Field, was spring-toothed and planted. It was necessary to replant five plats of variety sorghums, as well as the F and G plats of sumac.

The sewage system became plugged recently and three men worked two days locating the trouble. The tile was cracked in a number of places and a number of new tile will have to be inserted. A little planting has been done at odd times throughout the week.

The weather has been very hot the past few days and crops will soon be in need of moisture. Row crops are doing well, but wheat and pasture show the effects of the water deficiency. The rains, totalling 1.37 inches, last week increased the moisture content of the first foot, but below that level the soil is dry. Wind velocity has been very low most of the spring, but the past three days a strong southwest wind has come up about noon and blows until sundown. Fields which have not been cultivated have blown some, many of the young seedlings being cut off. Fortunately the station cultivating was far enough along to prevent blowing. Land which was broadcasted to cane has blown enough to partially fill the drill furrows, but the seedlings have not been injured.

Maximum temperature, 100; minimum, 52; precipitation, .02 inch; evaporation, 2.141 inches; and average wind velocity, 6.0 miles.

WOODWARD: -

Most of the week has been rather hot and it is beginning to get rather dry. There has been considerable wind during the latter part of the week. The wheat on the plats is ripening rapidly and all but a few plats will probably have to be harvested during the coming week. All the crops which were planted last week are emerging to a good stand. The crops on the fall-plowed plats are showing up a day or two ahead of those on spring plowing. Cherries are ripening at the present time. We do not have enough to amount to much on the station, but there are a lot of cherries over the county. Thinning of kafir plats will be started during the coming week. Some thinning has already been done on the early planting on the Cereal Project.

Work during the week has consisted of cultivating orchard and vineyard, kafir, peanuts, and a field of Sudan; planting cowpea hay test, some plantings on the Cereal Project, and some fields on the Dairy quarter. Fallows have been plowed and about 20 acres of alfalfa put in the barn.

Mr. Chas. J. Stauber, Senior Dairy Herdsman, on the station, is attending the meeting of the Holstein-Friesan Association, Kansas City, this week.

Maximum temperature, 91; minimum, 53; average wind velocity, 5.6 miles; evaporation, 2.244 inches; and precipitation, 0.

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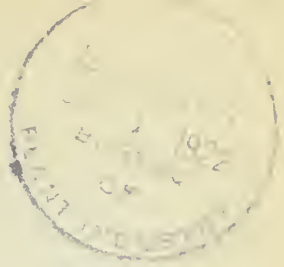

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 17 1922

REPORT FOR WEEK ENDING JUNE 17, 1922.
(Except as otherwise indicated.)

AKRON:

Very favorable growing weather continued throughout the past week. All the corn and cane plats and increase fields were cultivated. The greater portion of the forestry was cultivated. Much time was directed to removing pruned limbs and dead trees from the forestry. All station roads were disced. All fallow plats and fallow strips of ground were disced. The green manure rye plats were plowed under.

Maximum temperature 93, minimum 46; precipitation .53.

ARCHER, report June 10:

Weather conditionswere very favorable for the finishing of seeding corn and the seeding of millet. The warm weather caused a rapid growth of all crops and prompt germination of crops just seeded.

The prairies are furnishing excellent feed for all live stock and there is a manifestation of a determination to increase the number of live stock on most farms. The sheep men are much encouraged with the prices received for wool.

Maximum temperature 82, minimum 44; precipitation 0.01 inch.

ARCHER:

The high temperatures of last week were followed by precipitation during this week. Local thunder showers are frequent in this locality during the past week.

The corn on the Dry-land plats received its cultivation and the greater part of the field areas of corn and sunflowers have been harrowed. The ends of the Dry-land plats have been trimmed.

Maximum temperature 74, minimum 42; precipitation .89 inch.

BIG SPRINGS:

Weather conditions this week have been very favorable for all farm operations, as well as crop growth. All plats and fields have been knifed out, so now everything is fairly free from weeds for a few days at least. All crops are making a good growth now; cotton was slow about getting started, but is coming right along now.

All plats were trimmed and roadways were disced this week. The June 15 date of planting was made and the thinning work started.

The Early Wheeler peaches have started to ripen, but are not bearing very well, although what fruit there is seems of a good quality. The wild goose plums are bearing well, but most of the fruit falls off the trees just before it gets ripe.

Maximum temperature 87, minimum 65; precipitation .06 inch.

COLBY:

The week just closing has been the hottest and dryest that we have experienced all summer. Several of the winter wheat plats have begun to show the result of so much dry and warm weather. The bottom leaves on all of the winter wheat have dried up considerably, and on some of the early fall-plowed plats the leaves are dried almost to the top. In fact the wheat on early fall-plowed plats has used up all the available moisture. The winter wheat is in the soft dough stage now. On two days of the week, Tuesday and Wednesday, there were about two hours of real hot winds. Spring wheat on Rotations 2 and 3 is firing badly. The MC plats of all plant varieties show that the "A" plat, plowed before seeding, is the

Colby, contd.,

poorest of any of the plats, for that variety. This is true of all crops except for winter wheat where the late fall-plowed plats are equally as good as the early fall-plowed plats.

Corn continues to have a good color. Milo and kafir are up to an excellent stand. Feterita shows a good stand. All corn on the station was worked during the week.

Bindweed patches were worked during the week. Apparently we are beginning to make some headway on this field pest. We have had as many inquiries concerning eradication of this pest as on any one subject this season.

Maximum temperature 97; precipitation 0.

DALHART:

The past week has been very favorable for field operations. Milo was planted on all the D.L.A. rotations on Monday, the 12th. This completed all the D.L.A. plantings. Corn on the MC and Rotations had to have some replanting by hand. The kafir and cowpeas have a very good stand so that no replanting is necessary. The Cereal block was prepared again for planting the first of the week. The June 15 date planting as well as all varieties were planted on June 14. This was planted one day early because it looked as if it might rain during the day or at night. However, the rain did not arrive and planting has continued. All the experimental planting is now completed, also most of the increase fields. Grain and forage sorghum varieties were planted on fallow Thursday and the cowpea varieties on Friday. The June 1 date had to be omitted on account of rain.

All fallows were plowed on the 15th of this month. This is as early as they could be plowed and much better than if they had been plowed earlier. One plat of Acala cotton was planted this week. There are 1,000 acres of cotton being planted this year around Dumas, Texas, which is only 38 miles southeast of Dalhart. Several farmers over there have been growing a little cotton each year for some time, and they state they have always made a paying crop. One reported a yield of a little over two bales per acre last year. No great amount has been planted until this year.

DICKINSON:

Probably the best rain ever recorded at this station fell on the 15th. The rain began about 1:00 a.m. and fell continuously until after 6:00 p.m., a total of 3.89 inches being recorded. Most of it came very gently, so that on cultivated land there was very little runoff. The precipitation for the month now amounts to 6.11 inches - the mean for June is 3.01 inches.

More cutworm damage in corn showed up during the week. Several of the Rotation plats were badly thinned and were replanted with a hand planter. The damage done to the fields of corn in the county has been rather heavy. There seems to be no new damage showing up since the big rain.

The duck-foot cultivator purchased this spring has worked very satisfactorily so far. It is used to do much of the cultivation previously done with the disc, particularly in the working of fallow. Land worked with this implement absorbed practically all of the recent rain without washing, except on one rather steep slope. An implement of this type is desirable on the light soil of the station to prevent blowing during the early season before vegetation starts, while on fallow it leaves a ridged surface which does not blow and will absorb rainfall better than disced land.

Alfalfa and sweet clover plats were cut just before the rain.

Mr. J. M. Stephens, Mr. F. L. Kelso, and Mr. J. T. Sarvis visited the station on the 17th.

Maximum temperature 81, minimum 49; precipitation 3.96 inches.

GARDEN CITY:

Weather conditions during the past week have been very favorable for row crops. Wheat on continuously cropped land is showing the need of moisture badly. Winter wheat is beginning to ripen.

The third date of planting with sorghums was made on the 17th. All poor stands in the row crops have been replanted by hand.

The first cutting of alfalfa hay on the irrigated portion of the farm has been made. The highest yield obtained was 2.64 tons an acre.

Maximum temperature 98, minimum 59; precipitation 0; evaporation 2.751 inches; average hourly wind velocity 9.7 miles.

HAVRE:

Crops that have made much growth are beginning to need moisture. Some of the early grasses are suffering. The drilled alfalfa on the dry land is burning in spots. Winter rye is firing some near the ground, but the spring grains are still growing rapidly, the latter however are shooting and will need moisture soon. Slender wheat grass in the forage crop project is burning even in 3-foot rows. Brome in rows is making a very satisfactory growth and shows prospect of being heaviest yielding grass for this season. Trees in the shelterbelt have made a very satisfactory growth. Many of the conifers planted last spring looked as though they were dead this spring, but have in the past two weeks started to grow. On some of these trees most of the spines dropped off. Corn is growing rapidly and the stand is very good on most plats, although the Pale Western cut worms are cutting off some of the plants.

Roadways and alleys were cleaned during the week and the corn cultivated. Some of the alfalfa on the bottom was cut. The crop is very heavy and well advanced. Alfalfa seeded on the irrigated land with barley shows a good germination and is growing rapidly.

Temperatures during the past week have been very favorable for growing crops. The maximum temperature was 89, on the 14th, and the minimum 49, on the 12th. A local shower south of the station at this time measured nearly an inch. The only precipitation for the week was .28 inch which fell on the 14th.

HUNTLEY:

Field operations were interrupted on the 15th by a rain which fell steadily for 18 hours, and resulted in a total precipitation of 2.04 inches. This shower in addition to the previous rainfall for the month has brought the June precipitation to nearly an inch above the average. Warm weather throughout the week has promoted a vigorous growth of all crops, especially winter wheat and corn.

In the pasture experiments the rye plat was mowed to induce a new growth of forage, and the first cutting was made in the alfalfa and brome grass experiments.

Grasshoppers have appeared in alarming numbers in some parts of this locality and poison mixing "bee" have been held in several places. As yet the "hoppers" have not been unusually numerous on the Dry-land plats.

Maximum temperature 87, minimum 46; precipitation 2.11 inches.

JUDITH BASIN:

The past week has been comparatively warm and very favorable to crop growth. A heavy rain of .63 inch was received on the 14th and light showers were received on each of the following three days. The total precipitation for June

Judith Basin, contd.,

thus far is 2.98 inches which is only .06 inch less than the normal rainfall for the entire month. The soil contains an abundance of moisture and the crop prospects at present are the most favorable of any year since 1915.

All crops have made a very rapid growth. Winter rye is headed out and winter wheat on summer fallowed land is in the boot. Alfalfa is nearly two feet high and is commencing to blossom. All small spring grains have obtained a height of from 6 to 8 inches.

Because of the frequent wet weather this spring, weeds are exceptionally bad and field work during the week has been devoted chiefly to the eradication of weeds. All plats and fields of corn, sunflowers, and potatoes were cultivated. Corn plats in the rotations in Field "A" were hoed and all fallow plats in the rotations in both fields, which were plowed just prior to the heavy rains of last week, were harrowed. Plowing and harrowing of an 80 acre field was also continued. A new fence of about one half mile in length was erected along the west side of the main pasture and the old fence which was practically buried with drifted soil several years ago was removed.

Mr. Robert Walbers, a student at Montana State College, arrived at the station during the week to assist with the work on the rotations and shelter belt experiments.

Maximum temperature 81, minimum 48; precipitation .66 inch.

LAWTON:

Hot weather prevailed during the last week and the wind velocity was rather excessive on two days.

Although farmers in this county have not anticipated much of a yield of wheat their expectations have been further disappointed during the last 10 days. Much of the wheat did not fill. Heads were formed and developed as far as the milk stage, when the weakened plants died and dropped to the ground. That has been very largely the condition that has occurred in practically all of the wheat on the station. The causes may be due to several factors. Plant growth was stunted during the fall, winter, and spring. Abnormal growth developed within a very short period late in the spring. During the period of stunted growth the plants were too weak to develop a root system. During the period of rapid growth the root development did not expand because of the excessive precipitation, amounting to 13.48 inches from April 3 to May 30. During this period leaf rust developed extensively and most plant foliage was lost about heading time. This combination of factors seemed to have suddenly terminated the life of the wheat plant at the most critical period of growth and development. On the creek bottom land most of the wheat has filled fairly well, and some of it may yield as much as 7 to 10 bushels per acre. However, there is but little acreage with such favorable indications. Most of the wheat on the station has been cut. The remainder will be harvested within a day or two.

The cane traps around the wheat blocks did not hold the chinch bugs. Although the cane traps are simply loaded with bugs they passed through such feed at the first stages of migration to the adjoining plats of kafir, milo, corn, and cane. At the present time at least 20 or 25 plats have been practically destroyed. Where or when the damage will be checked cannot well be estimated now. Late planting by reason of wet weather in May resulted in a very young and tender growth of row crops at this time and spraying could not be very safely used as a measure of control.

The second cutting of alfalfa was made during the week. The rowed plat of alfalfa yielded at the rate of 900 pounds of cured hay per acre, while the broadcasted plat yielded at the rate of 1750 pounds of cured hay per acre.

Practically all of the rotation plats were thinned and cultivated during the week.

Messrs. E.F.Chilcott and L.F.Locke visited the station on the 16th and 17th.

Lawton, contd.,

Mr. King and one assistant from the Greenville, Texas, station arrived on the 17th to chop the cooperative cotton plantings.

Maximum temperature 93, minimum 67; precipitation .05 inch.

MANDAN:

Agronomy.

The past week has been cool, cloudy, and rainy. Rain fell on two days, making a total amount of 1.90 inches. One rain of 1.54 inches on the 14th is the largest single rain that has fallen in June since 1915. The total precipitation to date is 2.97 inches, which is the greatest amount for June that has fallen since 1915. The rain was fairly general over the Slope area. However, at the pasture south of the station only .94 inch fell.

Maximum temperature 86, minimum 49; precipitation 1.90 inches.

All small grain has made excellent progress during the week. Oats is just starting to head.

The first cultivation of all corn was completed and the crop is making rapid growth.

Hay cutting started early in the week. However, the best hay was not cut before the rain.

Cooperative Grazing Experiment.

Native vegetation has made rapid growth during the week. Artemisis frigida in the 30-acre pasture is much in advance of any of the other pastures. The indications are that it has increased in amount greatly over last year.

The cattle appear to be putting on rapid gains and all are in very good condition.

Arboriculture.

The blister beetles appeared in great numbers again on all caragana, hackberry, ash, and other plants, and spraying was begun. Owing to rains it has been necessary to discontinue for a few days. Poplar beetles are more numerous than usual, and the poplar cutting block in Field L has been sprayed twice.. The forest tent caterpillar (Malacosoma disstria) has appeared for the first time in any considerable numbers. The green ash are quite generally infested with the groups of feeding larva at this time. Contrary to their name they do not form a tent as do the tent caterpillars which infest plums, currants, rose bushes, and such plants. Up to this time their numbers have not been great enough to cause noticeable damage.

Hand weeding of the tree seedling fields has had to be resorted to on account of the slowness of the seedling to grow in the dry spell. The Chinese and American elm seed planted a short time ago is emerging and gives prospect of a good stand of seedlings.

Mr. A. W. Emerson and Mr. Ralph Hansen, have arrived from South Dakota, and will make the shelterbelt inspections this summer. All route maps for the summer inspections have been completed, and number 172 districts 24 by 30 miles in dimensions, in each district. The number of inspections to be made number 1108, with 224 of the older plantings of 1916 and 1917, that will not be visited.

Mr, F. L. Kelso, Superintendent of the Ardmore Field Station, has been visiting this week, and returns home today by way of Dickinson and Sheridan. Mr. J. T. Sarvis leaves today for Ardmore, travelling with Mr. Kelso. Mr. J. M. Stephens is visiting Dickinson Substation, and will probably return tomorrow, Sunday. Several Corn Clubs and High School classes have been visitors during the past few days, and have been shown over the Station.

Mandan, contd.

Horticulture.

The rain during the past week fell at a very opportune time, and was of great benefit to all horticultural plantings. It was just in time to prevent a failure for most of the small fruits, as currants, raspberries, gooseberries, and strawberries were all beginning to suffer from the drought. Gooseberries are looking especially well, and if the berries are not cooked on the bushes by hot winds, as was the case last year, a good yield will be obtained. Juneberries are starting to ripen, but for the most part are rather small.

Work during the week has consisted mainly of hoeing weeds and pulling trees in the old plum patch which has been discarded. A tractor and chains are being used for the pulling work.

NORTH PLATTE:

Weather conditions during the past week have been very adverse for all grain crops. Except for .31 inch on the 2nd no rain has fallen so far this month. The moisture storage at the beginning of the month was below normal. Temperatures and wind movement have been high. This combination of conditions coming as the grain crops are coming into head has caused a very rapid decline in condition. Immediate abundant rain would still bring much relief, but without this harvest will be early and the crops very light. This condition is quite general throughout this section. Corn is making a very rapid growth. First cutting of alfalfa will be finished in a few days. The crop is very heavy.

SHERIDAN:

Plowing for fallow was begun on the 13th. The plats in the Rotation field were found to be rather wet from the rains of last week to plow well. The rye plats for green manure were plowed, the soil there being in good condition for plowing. A good stand of rye about three feet in height was turned under. A heavy shower of about .75 inch occurred on the evening of the 14th, followed the next day by a gentle rain of nearly .50 inch precipitation. Field work was impossible again until today when plowing was resumed on the sandy soil on the north side of the station.

The heavy showers of the past two weeks have caused considerable washing, on the station, more than at any time within the past two years. However, but little of the washing has occurred on the plats.

All of the corn in the rotations and varieties were cultivated during the week. The most of the field corn was also cultivated, but the rain interfered with the completion of this work. All row crops are in need of cultivation, and if good weather continues this work will be resumed the first of the week.

All crops, and also weeds, are making a rapid growth. Hail with the heavy shower of the 14th damaged the corn some and garden vegetables considerably. Alfalfa is beginning to bloom. Nearly all of the shrubbery, nursery, and shelterbelt stock set out this spring is making a good start.

Maximum temperature 85, minimum 47; precipitation 1.26 inches.

TUCUMCARI:

Rain measuring .29 inch last evening broke the drought which has existed since June 3. This shower will aid row crops temporarily, but it is doubtful if it will benefit pastures much. Ranchers in this locality insist there is sufficient grass to last only ten days, as the hot weather and lack of moisture have combined to kill much of the grass. Row crops on the station have not shown injury, but grass in the lawns and along the roadsides have died to a noticeable extent the past week.

Tucumcari, contd.

Some cultivating has been done the past week, while it was necessary to hoe all row plats in the center field, due to the large number of bull nettles which could not be killed by cultivation. Some hoeing has been done on the variety plats, while most of the variety plats and the early date plats have been thinned.

Two men spent two days repairing the sewer, putting in new tile, and filling the holes, while a crew of four spent most of two days working on the well, which had sanded down again.

Soil moisture samples taken on MC milo plats show these plats to be very uniform in moisture content. Plat C, milo on fallow, is slightly higher than the others, while it is noticeable that the first, fourth, and fifth feet on all plats contain less moisture than the second, third, and sixth. Moisture content in most cases ranges from 7 to 11 per cent.

Spring wheat on the station may make a crop if an abundance of moisture is obtained. Plats B and C are in head, while A plat is practically dead. Wheat prospects in this locality are very poor, as Prof. Queensberry, extension worker, this week stated, the B and C plats had the best growth he had seen in the county in four days travel. It is doubtful if they will make more than 12 bushels per acre under optimum conditions. It is reported that wheat east and south of here, on the plains, will make from one-half to one-third a normal yield. Only the most promising was saved, as a large acreage of winter wheat was plowed up this spring for row crops. Row crops are doing fairly well to date and are somewhat earlier than usual.

Maximum temperature 102, minimum 61; precipitation .29 inch; evaporation 2.671 inches; average wind velocity 7.5 miles.

WOODWARD:

The past week has been very hot and dry, with only one small shower with hot wind blowing on several days. Since the 22nd of May we have had only .31 inch of precipitation in four different showers.

Crops which are up are making good growth and wheat is the only crop likely to suffer from lack of moisture, for some time. The wheat and rye on the plats were cut and all the other wheat on the station was cut during the week. The wheat apparently did much better than we expected it to do, making an especially heavy yield of straw; the heads also seemed to be well filled.

Most of the other work on the station done during the week consisted of cultivating. Mr. E. F. Chilcott, and Mr. L. F. Locke made a trip overland to the Lawton station during the latter part of the week. Several orchards and vineyards were visited en route.

Maximum temperature 95, minimum 67; precipitation .06 inch; evaporation 3.093 inches; average wind velocity 9.3 miles.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 24 1922

REPORT FOR WEEK ENDING JUNE 24, 1922.
(Except as otherwise indicated.)

AKRON:

Rotation corn plats were given second cultivation the first part of the week. The remainder of the brush was removed from the forestry and the forestry cultivated. Main orchard was cultivated. Other work consisted of mowing the station grounds and making other necessary preparations for the farmers' picnic. The picnic is in session today (June 24,) there being a larger crowd than last year when it was estimated that 2,000 people were in attendance.

The excessively warm weather continues to prove favorable for corn growth, but under the same conditions oats and spring wheat are beginning to suffer. Barley looks uniformly good on all plats but the oats and spring wheat have differentiated quite noticeably according to cultural treatment. Fallow plats look the best. Winter wheat where winter survival was secured promises well. Winter wheat, oats, and spring wheat as well as barley are coming into head.

Maximum temperature 96, minimum 55; precipitation .52 inch.

ARCHER:

Exceptionally high temperatures were recorded during the week. However, the last two days have been cool. The precipitation has been light and the evaporation heavy.

The work at the station for the past week has consisted of finishing the lining of the Dry-land plats, plowing and spring-toothing the fallow plats, and cultivation of the corn the second time. All crops except alfalfa and brome grass are making a very rapid growth.

Mr. W. L. Quayle, Director of Experiment Substations, spent three days at the station and left for Torrington, Wyoming.

BELLE FOURCHE, report June 17th:

The weather remains cool and moist. Small grains over the county, in general, are the best that they have been in years. On the dry land rotation the rye and barley are headed out and the oats are beginning to head. The winter wheat and spring wheat are forming straw.

The sorghum was planted during the week. Corn on fall-plowing is distinctly better than on spring-plowing. Potatoes are now up with nearly a perfect stand.

So little field work has been possible that weeds have obtained quite a start and will probably be more troublesome than in previous years.

Maximum temperature 83, minimum 47; precipitation .73 inch.

BELLE FOURCHE:

Warm weather and continued rains caused rapid growth of all crops. Small grains in particular are looking well. Oats are now fully headed and wheat is beginning to seed. Very little leaf rust has appeared as yet on any of the small grains.

Sorghum planted on June 13 came up on June 18 with nearly a perfect stand, All corn plats were thinned on June 19, and all corn and potato plats were cultivated during the week.

Soil samples show that the small grains are still well supplied with moisture, but that alfalfa is almost dry.

Haying has been delayed by frequent rains, but it is expected that it will be finished next week.

Maximum temperature 95, minimum 49; precipitation 1.13 inches.

COLBY:

Weather conditions have remained hot and dry during the week. All early sown winter wheat is gradually drying up, this is especially true of the early and late fall-plowed plats. There has apparently been enough moisture in the straw to cause the grain to develop, but probably not enough to give a plump kernel. Of the spring grains the spring wheat seems to be suffering the most from lack of moisture. Winter wheat and barley cutting will probably start sometime the coming week.

Listed milo and feterita plats were worked during the week. Corn plats are apparently not hurt by the dry weather so far. They were all worked and thinned to a uniform stand during the week. Pinto beans are growing nicely. Canada field peas for green manure were plowed under on Monday. They had reached about 20 inches in height when plowed under.

All fallow plats were disced during the week. The "I" plat of the Methods of Fallow series was replowed during the week.

Visitors during the week included: Hon. E. N. Underwood, of the State Board of Administration; Dean F. D. Farrell, Director of the Kansas Experiment Station; Mr. A. L. Hallstead, in Charge of the D.L.A. work at Hays, Kansas; and Mr. Swanson, of the Cereal Office at Hays.

Maximum temperature 101, minimum 56; precipitation 0.

DALHART:

This week has been a warm one. The temperature did not get higher than 93 but seemed as if it were around 100. Two days of the week were quite windy and did not miss being hot winds by a great deal. One small shower occurred during the week, netting .20 inch. This was sufficient to halt planting for a few hours but not enough to stop plowing. One small shower occurred last week that was not reported. It netted .25 inch and aided the germination of the crops that were planted that week.

Field operations have progressed rapidly during this week. At this writing everything is planted and all the experimental crops have emerged. Everything is in ship shape. The north field was trimmed during the week and all other plat fields staked for trimming. The thinning will be started the first of the week and will continue until finished. The corn will be first, then kafir which is just the right size to start thinning, then milo will likely be large enough to thin. By the time the rotations are all thinned the date and variety plantings will be large enough to thin. The M.C. kafir in the south field is very uneven in height on account of so much water standing on the plats for nearly two weeks. Soil sampling has been taken regularly each week since planting. The last date "June 30" will be planted next week and will end the date planting.

This part of the Panhandle has received an unusually small amount of rain for June to date. By this time it is usually raining a little every few days. Some farmers are reporting that their fields are getting so dry that they cannot plant. This is not the case where proper precaution or handling was practiced. Only the ones that have let weeds grow in their fields are experiencing these conditions.

Maximum temperature 93, minimum 59; precipitation .20 inch. Clear warm weather prevailed during most of the week.

DICKINSON:

Favorable weather has continued during the week and all crops have grown rapidly. Spring grains are just beginning to head and present a splendid appearance. Crop prospects in general are the best since 1915. Alfalfa was cut during the week. All corn and row crops were cultivated. Considerable time was spent in

Dickinson, contd.

mowing roadways, cutting weeds, and cleaning up around the station.

Professor J.H.Shepperd visited the station on the 21st and Mr. Emerson of Mandan on the 24.

Maximum temperature 88, minimum 49; precipitation .33 inch. June precipitation to date amounts to 6.45 inches.

GARDEN CITY:

Weather conditions during the past week have been favorable for the growth of field crops, with the exception of the spring grains. Both barley and oats have suffered from the lack of moisture and the hot weather.

All winter wheat on continuously cropped plats and a part of that growing on fallow was harvested today. The remaining winter wheat will be harvested the first of next week.

The third date of planting with sorghums has emerged to a good stand.

The station was visited this week by Director F. D. Farrell of the Kansas Station, Superintendent E. F. Chilcott of the Woodward Field Station, Superintendent L. E. Aicher, and Mr. A. L. Hallstead of the Hays Field Station, and Mr. E. M. Underwood of the Kansas Board of Administration.

Maximum temperature 98, minimum 60; precipitation 0; evaporation 3.057 inches; average hourly wind velocity 7.6 miles.

HAVRE:

There was a rain Wednesday of this week in this locality. From 10 to 15 miles north of the station there was nearly an inch of precipitation. At the station there was .08 inch. Temperatures have been high and most of the crops, aside from a few plats of fallow are suffering. The stools are drying and unless rain comes soon there will be only one head to each plant.

Corn is making a very good start, with very little cutworm damage on the plats. About twenty per cent of a commercial field of 60 acres has been taken, but the damage seems to be much less the last day or so than it was the first of the week.

Alfalfa and the grasses that are broadcast were harvested during the week, the yields running as high as 1900 pounds per acre. A good cutting of alfalfa was secured from the bottom fields which is for feed purposes.

HAYS:

The weather during the week has been dry and hot, with temperatures ranging between 56 and 98 degrees. Hot winds have been in evidence three days. It has been windy all week. Precipitation in the amount of .28 inch was recorded the 19th, but this was of no value to small grains.

Spring sown small grains as well as winter wheat has suffered considerably. Prospects of heavy crops of barley and oats have been materially reduced. Oats and barley are either mature or dried up. These grains are being harvested today. It is estimated that yields will probably range from about 8 to 35 bushels for barley and oats perhaps slightly less. Spring wheat is perfectly green, and suffering more than any of the small grains. Winter wheat, some of the fall or winter germinated plats are maturing with good color, and are about ready for harvest. The spring germinated winter wheat is still very green, but is apparently a little farther advanced than the spring wheat and seems to be suffering a little less; however, it is suffering very much from drought and heat.

During the week all the corn and sorghum on the project were cultivated. The sorghums range from 12 to 15 inches high and corn from 30 to 40 inches, and is all looking fine. The sorghums were thinned during the week ending June 17. Brome grass hay was mown June 19.

HUNTLEY:

The week has been characterized by comparatively high temperatures and humidity. These conditions were especially favorable for the growth of corn. Small grains have taken on a more healthy color with the advent of warmer weather, and according to the soil moisture determinations the spring-sown crops have as yet made little impression on the accumulated supply of stored moisture. Some of the plats of winter wheat are beginning to show the first signs of moisture depletion by yellowing leaves and heading on short straw.

Field work has consisted of plowing summer fallow, marking out roads, and cultivating alleys. Poisoned bran has been scattered around the edges of the dry-land fields and over other places on the station where grasshoppers are appearing in unusual numbers. Reports are to the effect that grasshopper infestation is general throughout the county and already some damage has been done.

Maximum temperature 92, minimum 52; precipitation .70 inch.

MANDAN:

Agronomy.

The weather for the week has been for the most part moderately cool, with showers during the early part. The temperature on the 22nd, though not abnormally high (Maximum 91 degrees), caused much discomfort on account of the high humidity and lack of wind. June precipitation to date is 3.40 inches, which is .11 inch below the normal for the month.

Maximum temperature 91, minimum 52; precipitation .43 inch.

Crop growth has been rapid but apparently not abnormally so. Heading of oats in the rotation plats was complete early in the week. Wheat heading is pretty well along to date. Flax has been blooming since the first part of the week.

The second cultivation of corn is pretty well along. Corn bids fair to make a good crop this year.

Hay cut last week is being put in the stack this week. Alfalfa cut this week is being put in the cock to cure until early next week. Brome of last year's seeding is a very light crop.

Soil samples taken this week show that the rains of the current month have not penetrated far beyond the limit of penetration this spring. On spring plowed wheat the penetration is about two feet and on fall plowing about six inches less. On plats sampled in the south field where the soil is heavier, the penetration is considerably less. Indications are that we are still dependent on additional rains if we are to hope for anywhere near a normal crop.

Horticulture.

Prospects continue to be favorable for a good, or at least, a fair fruit year. However, a hard wind on June 23 caused a considerable number of crabs and plums to drop.

Juneberries in the seedling selection blocks are now ripening, and there is much variation in the fruit and in the time of ripening. Some selections have been made. Early Juneberries are looking much better than was the case last year, while the Success Juneberry, a late variety, that did very well last year will have but a light crop.

Currants are now starting to turn red, and raspberries have set a considerable amount of fruit. Gooseberries, both seedlings and cultivated varieties, are generally loaded with fruit. The first strawberries of the season were picked on June 23, South Dakota and Minnesota No.363 giving the best yields. Most varieties of strawberries are not setting fruit very heavily this year. Peas are now being obtained from the acre garden, the yield being fair.

Mandan, contd.

Hoeing weeds, pulling the discarded blocks of plum trees, and spraying potatoes, have all received attention during the past week.

In company with Mr. T. H. Sullivan, Secretary, Commercial Club, Mandan, N. Dak., the following visited the Field Station on Tuesday afternoon, June 20:-- C. C. Davis, Commissioner of Agriculture, State of Montana; R. G. Catron, Deputy Commissioner of Agriculture and Labor, State of North Dakota; F. S. Talcott, North Dakota Board of Administration; C. C. Converse, State Tax Commissioner; W. G. Stephenson, Associated Press Bureau Manager, Bismarck, North Dakota.

Mr. F. E. Cobb, with Mr. A. W. Hansen, left the station on Tuesday morning by automobile on their first Shelterbelt Demonstrations Inspection trip for the present year. They plan to travel via Selfridge into South Dakota. Mr. Arthur Emerson left the same day for the Dickinson sub-district. All three are expected back early in July.

NORTH PLATTE:

Extremely dry conditions prevail. No precipitation has occurred during the week or since June 2. Temperatures and wind movement have been high. A Maximum of 101 degrees was reached on the 22nd.

Grain is drying up or ripening. Much of it will need to be harvested the coming week. Spring grains on continuously cropped land will make a very light crop.

Corn is making a rapid growth. Stands have been thinned to count on all plats during the week. Roadways and alleys have been cleaned up and stakes put out in preparation for the Field Day set for June 28.

TUCUMCARI:

Work the past week has consisted principally of cultivating, thinning sorghums, and hoeing. Row crops are growing well, while it seems almost impossible to keep the weeds, especially bull nettles, down.

Although the days have been hot the past week, the nights have been cool and the wind velocity low, so the soil does not seem to be drying out very fast. Pastures show the lack of water, but most row crops, even where the land has not been worked thoroughly, are making satisfactory growth.

Spring wheat seeded on M.C. winter rye plats, which blew out early in the winter after making a very poor germination, will be a total failure, as most of the plants are dead. Spring wheat on the B and C Winter wheat plats is in full head and will make a light yield, while most of the plants on the M.C.A. plat have died. Early in the summer the wheat on rye plats showed up much better than that on the wheat plats, but the past two months that on the wheat plats has steadily forged ahead.

Maximum temperature 96, minimum 59; precipitation .20 inch; evaporation 2.574 inches; average wind velocity 5.5 miles.

WOODWARD:

We have had another week of very hot dry weather, with no precipitation excepting a very small shower today, the 24th. The crops on the station are all making good growth, and are not as yet showing signs of lack of moisture, though we have not been able to finish quite all of our planting, having had no precipitation in quantity sufficient to be of any use for over a month.

The wheat harvest in this locality has commenced. Work during the week has consisted principally of cutting a few plats of wheat and rye that were too green when the others were harvested, thinning of experimental plats, fencing on

Woodward, contd.

the dairy quarter, and cutting and putting in the barn the second crop of alfalfa.

Mr. E. F. Chilcott, Superintendent, left Thursday to visit Garden City, to confer there with Mr. Hallstead of the Hays, Kansas, station and officials of the Manhattan Experiment station.

The first peaches to ripen, Arp beauty, were picked during the week.. Soil samples were taken on the C.C. rye and milo plats.

Maximum temperature 99, minimum 60; precipitation T; evaporation 2.641 inches.

BIG SPRINGS:

This has been another week of good growing weather. A slow rain of .62 inch fell June 16; this fell so eacy that it soaked up the surface in good shape, but did not pack the soil. The rain together with the warm weather, which has prevailed this week, has given all crops a good boost. Soil samples taken to a depth of six feet show planty of moisture through the last foot.

The work this week has consisted mainly of thinning sorghums, chopping cotton, and cultivating some of the field stuff. All the sorghums in the Dry-land project have been thinned and most of the cotton chopped.

Maximum temperature 92, minimum 64; precipitation .62 inch.

LAWTON:

Report of Lawton Field Station: The weather has been hot and dry during the past week.

Corn is silking and tasseling. More humid weather would be highly beneficial to the crop.

Thinning of all sorghum and cotton crops was completed during the week. Crops which are not or have not been heavily infested with chinch bugs are making satisfactory growth.

Wheat and oats harvest throughout the county has been pretty thoroughly completed during the week. The wheat crop was, in most instances, very light. Some fields were not harvested. Oats and barley averaged fairly good crops.

Maximum temperature 99, on the 19th; precipitation 0.15 inch.

NOTE:-- All field men of this office are requested to forward immediately unused transportaion requests and outstanding stubs of used transportation requests for the fiscal year ending June 30, 1922.